RITUAL CIRCUMCISION;
NEONATES AND YOUNG INFANTS

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ABSTRACT... Objective: To compare the results of one of the most commonly performed surgical procedure in Pakistan i.e. ritual circumcision by using Bone cutter or Sinus forceps methods, in term of complications. **Design:** Comparative study. **Setting:** CMH Rawalpindi. **Period:** June 2009 to Dec2010. **Material and methods:** After thorough physical examination with normal haemoglobin, BT (bleeding time) and CT (clotting time), 200 neonates and young infants with age ranging from two weeks to three months ,were included and two equal groups were made. **Results:** There was no significant difference in terms of bleeding , local infection etc between two methods but the cosmetic appearance was more satisfactory in Sinus forceps method. **Conclusions:** Both methods proved to be safe at this age but Sinus forceps method is better than the Bone cutter in term of cosmetic appearance.

Key words: Circumcision, Bone cutter, Sinus forcep, Neonate, Infant.

INTRODUCTION

Circumcision is commonly conducted in neonates , infants and children, for religious , cultural and medical reasons It is evident by the fact that circumcision is not mentioned in any form in the Holy Quran but in Muslim societies the practice is attributed to the prophet of Islam (Sunnah)[1]. Estimate from WHO suggest that 30% of male world wide are circumcised, of whom 2/3 are Muslim[2].

In Pakistan 85-90% of circumcisions are performed by traditional circumcisors, paramedical theater staff, no suture with unsterilized instruments and ashes of wood are used to establish haemostasis[3] but in my experience, much has been changed due to awareness, increase literacy rate, improved medical facilities in cites and towns. A big proportion(41%) of male children are still getting circumcised by unskilled (quacks and barbers) operators[4]. Now more circumcisions are being performed at medical hospital / clinics, using local anaesthesia, with proper sterilization and suturing techniques. The WHO currently recommends circumcision be recognised as an intervention as a part of comprehensive program for prevention of HIV transmission in areas with high endemic rate of HIV[5].

The ritual circumcision in Pakistan is usually performed before school going age preferably in infants . In the world, the circumcision is performed by Gomco clamp, Mogen clamp, free hand circumcision , Plastibell , open method etc but usual methods being performed for circumcision in Pakistan are open method (plastic surgical technique) , instrumental (Bone cutter, Sinus forceps , artery forceps) , and Plastibell technique at hospitals / clinics practice. The commonest method of circumcision is Bone cutter method in Pakistan[4]. WHO and joint United Nation program on HIV / AIDS(UNAIDS) have recommended considering neonatal circumcision in addition to adult as a longer- term HIV prevention strategy[6].

MATERIAL AND METHODS

The study was conducted at CMH Rawalpindi from June 2009 to Dec 2010.The 200 neonates and infants were included in this study and divided into two equal groups of 100. All of them were between the ages of two weeks to three months (25 neonates and 75 young infants in Bone cutter and 30 neonates and 70 young infants in Sinus forcep method). All who had good physical health, normal haemoglobin , normal bleeding and clotting time, excluding Hypospadias, were included in this study.

Circumcision was done by using small size Bone cutter in one group and Sinus forcep in other group. The standard procedure i.e after using ring block of local anaesthesia (1% lignocain without adrenaline) , foreskin retracted , smegma cleared , clamp application, excision of foreskin and stitching with 4/0 catgut and Vaseline gauze dressing, was adopted . They were followed up after 2-3 weeks in surgical OPD for the final out come of the

Table. Comparison of Complications - Sinus forcep versus Bone cutter

Operative method	Haemorrhage		Superficial sepsis		Cosmetic appearance parents unsatisfied	
	Neonate	Infant	Neonate	Infant	Neonate	Infant
Sinus forcep	1	5	-	3	-	-
Bone cutter	-	3	1	3	2	2

procedure

RESULTS

The results were compared between the two procedures in term of per and post operative complications. The per and post operative bleeding was 6% (1 neonate, 5 infants) in Sinus forcep method and 3% (all infants) in Bone cutter method. The bleeding was controlled easily with manual local pressure. The local infection was 3%(3 infants)in Sinus forcep and 4% (1 neonate, 3 infants) in Bone cutter and these were treated by local antibiotics. The frenuler ulcer 2%(infants) in Sinus forceps and 3% (infants) in Bone cutter and these were treated conservatively. In Sinus forcep method all the parents were satisfied with final cosmetic appearance but in Bone cutter method , the four parents were unsatisfied(2 neonates,2 infants). In spite of explanations and reassurances , the one neonate and one infant had to undergo re-do surgery by open method.

DISCUSSION

The circumcision is commonly performed in neonates , infants and children for religious, cultural and medical reasons, yet there has been no systematic reviews of published literature on complications associated with a procedure at these ages.. The different methods used for circumcision in neonates and infants and various complications in different methods are elaborated in this discussion. Although Sinus forcep is being used for circumcision but no article has been published in the literature.

The adverse events following circumcision likely to be due to several factors directly associated with complications such as age at circumcision, expertise of the provider , sterility of the conditions under which the procedure is under taken and the indication (medical , ritual, cultural) for circumcision. The lower frequency of complications among neonates and infants is likely to be due to simple procedure and better healing capability in the new born . This advantage is illustrated by the US study in which no complication was seen among 98 boys circumcised in the first month of life but 30% of boys aged 3-8.5 months had significant post operative bleeding requiring suture repair[7]. As with prospective studies in neonates and infants, few serious adverse events were reported (<0.2% in all studies)[8] except among infants in one US study, where 3/230(1.3%) of infants required circumcision revision[9].

In one study in Pakistan, there was 1.9% (total 1000 cases) incidence of over all complications in neonates with mild to moderate bleeding in 6(31.6% of complications) cases, 4(21%) cases of superficial sepsis, 2(10.5%) cases of frenuler ulcer and 3(16% of complications) cases of inadequate circumcisio[10].

Neonatal circumcision is most commonly performed using one of three techniques, the Mogen clamp, the Gomco clamp, Plastibell device and neonatal complications are rare, although haemorrhage, local infection, meatal ulceration and poor cosmetic results have been reported[11]. In recent study of Nigeria, in the neonates the over all complication rate of procedures ranges between 0.19% - 3.1%[12].

In Iranian study, the over all complications in Conventional Dissection Surgery(CDS) and Plastibell Device were 1.95% and 7.08% respectively and the results of this study suggested that the Plastibell Device for neonates and low weight infants with thin prepuce and Conventional Dissection Surgery for other infants[13]. In children, the over all complication rates (per and post operative) were similar between Conventional

Dissection Surgery method and Plastibell method groups being 17.6% and 17.8% respectively[14]. The comparison of above two studies i,e. Plastibell and CDS shows that the complications rate is higher in children as compared to neonates and infants.

The ratio of the complications by Plastibell is significantly higher in infants as compared to neonates , however it is an easy, quick and safe technique and the complications included bleeding in 12 cases (I neonate and 11 infants) and localized superficial infection in 12 cases (1 neonate 11 infants) out of 245 cases[15]. In an other study, the Platibell has been found to be cheap and easy to use and was associated minor, remediable complications in less 3% infants[16].

In one more study, out of 100 Plastibell circumcisions in neonates, the overall complication was 2% mainly bleeding and infection and the use of the Plastibell seems to be superior technique for neonatal circumcision[17].

In other Pakistani studies using Plastibell, circumcision can be safely performed in a hospital set-up in the first month of life preferably in the first week18 and this method has least number of complications and provide good cosmetic results[18,19].

In one Israely multi centric survey, the complications of neonatal circumcision are rare and in most cases are mild and correctable. Among the late complications most common was excess of skin in 38(57% of complications) cases[20].

CONCLUSIONS

The Religious circumcision will continue to practice in Muslim community all over the world. The different methods are being practiced for neonates and infants with certain advantages. In our study, the Sinus forcep method is safe, reliable with minimal insignificant complications and good cosmetic results in neonates and young infants..Furthermore this method is safer for less experienced circumcisors.

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